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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,527	07/24/2002	Chun-Hsu Lin	8992-US-PA	6640

31561 7590 02/06/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

LAO, LUN YI

ART UNIT	PAPER NUMBER
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2677

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,527

Applicant(s)

LIN ET AL.

Examiner

LUN-YI LAO

Art Unit

2677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 9 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 3-7,9,10 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Shigeta et al(6,646,625).

As to claims 1 and 8, Shigeta teaches a brightness correction apparatus of a plasma display, of which a brightness error of ideal display brightness and actual display brightness for each gray scale has been established, the apparatus comprising: an inverse γ conversion lookup unit(ABL, 31), to receive an input signal of a currently displaying pixel, and to convert the input signal(pixel data, D) into a first gray scale data(D_{BL}) to be output according to an inverse γ conversion rule(see figures 6-8; column 9, lines 59-68 and column 10, lines 1-10); an error diffusion unit(33), coupled to the inverse γ conversion lookup unit(33) to receive the first gray scale data, and to modify the first gray scale data into a second gray scale data recorded as a display brightness error of the currently displaying pixel by considering a display brightness error of a

Art Unit: 2677

neighboring pixel of the currently displaying pixel(see figures 6, 15-16; column 12, lines 18-26 and column 13, lines 18-43); and a gray scale lookup unit(350 or 2), coupled to the error diffusion unit to receive an integral portion of the second gray scale data, and to look up a gray scale allocation table to obtain a sustain pulse number of the currently displaying pixel(see figures 2-3, 15, 17, 19; column 6, lines 48-68; column 7, lines 1-67; column 10, lines 45-51; column 13, lines 67-68 and column 14, lines 1-33).

As to claim 8, Shigeta teaches an integer gray scale lookup unit(350, 0-16 grey scale level), coupled to the error diffusion unit(33) to receive an integral portion of the second gray scale data, and to look up an integer gray scale table to obtain a third gray scale data; and a gray scale allocation lookup unit(2), coupled to the integer gray scale lookup unit to receive the third gray scale data, and to look up a gray scale allocation table to obtain a sustain pulse number of the currently displaying pixel to be output(see figures 2-3, 15, 17, 19; column 6, lines 48-68; column 7, lines 1-67; column 10, lines 45-51; column 13, lines 67-68 and column 14, lines 1-33).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11-12 rejected under 35 U.S.C. 102(b) as being anticipated by Seiji et al(JP09-006282).

Seiji et al teach a brightness correction method of a plasma display, comprising: obtaining a brightness error for each gray scale by measuring ideal display brightness and actual display brightness thereof, so as to establish a brightness error Table(38); receiving a first gray scale data of a currently displaying pixel; adding the first gray scale data to a weighted display brightness of a neighboring pixel(A(i, j-1)); A(i-1, J)) of the currently displaying pixel as a second gray scale data; looking up the brightness error table to obtain the brightness error of the second gray scale data; and recording the brightness error(ROM, 38)of the second gray scale data as the display brightness error of the currently displaying pixel(see figures 1-3; abstract and paragraphs 3-6, 17-21 and 35-37).

As to claim 12, Seiji et al teach the step of recording the brightness error includes recording a decimal portion(error weight signal) of the second gray scale data(see figures 1-2 and paragraph 21).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seiji et al(JP09-006282) in view of Shigeta et al(6,646,625).

Art Unit: 2677

Seiji et al teach a brightness correction apparatus for a plasma display comprising an error diffusion unit(28) and a gray scale lookup unit(33)(see figures 1-3; abstract and paragraphs 3-6, 17-21 and 35-37).

Seiji et al fail to disclose an inverse γ conversion lookup unit.

Shigeta et al teaches an inverse γ conversion lookup unit(31); an error diffusion unit(33) and adder(332 or 333)(see figures 6-8, 15; column 9, lines 60-68; column 10, lines 1-15; column 12, lines 18-68 and column 13, lines 1-65). It would have been obvious to have modified Seiji et al with the teaching of Shigeta et al, so as to improve the display quality by inverting gamma compensation.

As to claim 2, Seiji et al teach a brightness correction apparatus comprising an adder(31, 32) and brightness error table(38)(see figures 1-3; abstract and paragraphs 3-6, 17-21 and 35-37).

Allowable Subject Matter

7. Claims 3-7, 9-10 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to claims 1-2, 8 and 11-12 have been considered but are moot in view of the new ground(s) of rejection.

Applicants argues that Shigeta does not teach an error diffusion unit as cited in claims 1 and 8 on page 2-3. The examiner disagrees with that since Shigeta teaches such feature(see claim 1 rejection above).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Morita et al(US 2002/0135595) teach an error diffusion circuit.

Koo et al(US-2002/0175922) teach a reverse gamma corrector(62A) and an error diffuser(64).

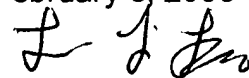
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2677

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 6, 2006

A handwritten signature in black ink, appearing to read 'Lun-yi Lao', written in a cursive style.

Lun-yi Lao
Primary Examiner